Procedures for Preparing Reports and Retaining Case Records

1 Purpose

This document sets forth the procedures for preparing, reviewing, and issuing an FBI *Laboratory Report* (7-1, 7-1 LIMS), and retaining case records for Forensic Advantage (FA) and legacy cases. It also supplements the requirements in the FBI Laboratory *Quality Assurance Manual (QAM)* and the FBI Laboratory *Operations Manual (LOM).*

2 Scope

These procedures apply to Explosives Unit (EU) personnel who generate case records and/or prepare or issue *Laboratory Reports*. These procedures also apply to examiners who perform verifications of identifications and associations, conduct technical reviews, and conduct administrative reviews.

3 Case Records

A case file consists of the administrative and examination records for a given case. It is a compilation of case records, requests for examinations, photographs, technical records, and other pertinent communications and information. These records (physical or electronic) will be retained in the FBI files and include records in an electronic format (uploaded to Sentinel) or in physical format (1A or 1C package), as appropriate.

3.1 Administrative Records

3.1.1 Administrative records are notes (e.g., when only administrative information is included), forms, printouts, charts, and other records that **do not** pertain to the conclusions of the examinations performed.

3.1.2 The following are defined as administrative records:

- Request for examination (or reference to serial in Sentinel)
- FA Case Report
- FA Case Record Report
- FA Case Communication Log
- FA Case Record Communication Log
- *Activity and Communication Log* (7-245)
- *Examination Plan* (7-262, 7-274)
- Chain-of-Custody Log (FA, 7-243, 7-243a)
- Secondary Evidence Inventory

- *Shipping Invoice* (7-264 LIMS)
- Check-in notes (when only administrative information is included)
- *Laboratory Worksheet* (7-2)
- Destruction of explosives-related evidence order

3.2 Examination Records

3.2.1 Examination records are notes, forms, analytical instrument printouts, charts, and other records that **do** pertain to the conclusions of the examinations performed.

3.2.2 The following are defined as examination records:

- Check-in notes (when relevant evidence information is included)
- Case notes
- Instrument printouts, including operating conditions (parameters, including instrument checklist)
- Calculations, data, graphs, charts
- Photographs
- Videos
- Printouts of electronically submitted evidence
- References
- *Laboratory Report* copies
- Explanation and authorization for any minor deviations from Standard Operating Procedures (SOPs) or a *Major Deviation Request* (7-258), if applicable.

3.2.3 Each examination record must include the initials of the person who processed, analyzed, and/or examined the evidence; the date of the examination, analysis, or processing activity; initials of the examiner indicating that each page was reviewed and that the examiner agrees with the content of the page; and the Laboratory number.

3.2.4 Electronic examination records will be uploaded into the appropriate Object Repository in FA by the creator if unclassified and practicable. Multiple individuals may prepare an electronic examination record if each individual's initials are present next to the portions of the record where they conducted work. Generally, check-in notes are stored in the Case Object Repository and case notes and analysis results are stored in the Case Record Object Repository.

The examiner will "Approve" the record in the Object Repository. If the record was created by a technician, the examiner's approval indicates his/her review and agreement with the content.

3.3 Retaining Case Records

3.3.1 Physical and electronic supporting records will be prepared and retained according to the LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records for Legacy Cases and LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records in Forensic Advantage (FA).

3.3.2 Administrative and examination records, together or separately, will be accounted for in their totality and that totality will be recorded for physical 1A(s)/1C(s).

FA will be used to account for all FA-generated electronic administrative and examination records included in a Case or Case Record. This electronic file will be serialized in Sentinel.

For physical records, one of the following methods must be used for proper accounting:

- Number each page of the administrative and examination records sequentially, indicating the last page in some manner.
- Number the pages of the administrative and examination records in the form "page __of__." This may be done for each section.
- On the 1A envelope, write a description of the type and number of administrative or examination records present.

3.3.3 A "chart" refers to a single page. A chart may have more than one display of data on it but is counted as one page. When information is on two sides of a piece of paper, this counts as two pages.

3.4 Abbreviations Used in Case Records

3.4.1 The *Abbreviations Used in Explosives Unit Case Records* (Appendix A) contains a list of abbreviations within the fields of explosives, chemistry, and fire debris and ignitable liquids, that are commonly used by EU personnel. Any other abbreviations that are not expected to be readily recognized will be defined upon first use within each case file. Abbreviations that are expected to be readily recognized may be used without defining them.

4 Case Review

A review of a *Laboratory Report*, as described in the LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records for Legacy Cases and the LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records in Forensic Advantage (FA), encompasses three types of review: verifications of identifications and associations, technical review, and administrative review.

4.1 Verification of Identifications and Associations

Verification of identifications and associations is defined as a comparison of physical and/or chemical traits that results in repeatable similarities between the items with a coexistent lack of meaningful differences.

4.2 Technical Review

Technical reviews and verification of identifications and associations, if applicable, will be conducted when a *Laboratory Report* contains examination results. The technical review and verification of identifications and associations will be combined into a single review process and will be conducted in accordance with the QAM and LOM practices.

The technical review and verification of identifications and associations will be conducted by a technical reviewer who is authorized in the sub-discipline being reviewed. Any physical case records will be delivered to the reviewer or scanned and transferred electronically.

The technical review will determine if:

- The examinations and supporting case records conform to appropriate technical procedures and applicable portions of the QAM, LOM, appropriate explosives-related documents, and technical procedures.
- The appropriate examinations have been performed.
- The examiner's conclusions are consistent with the data records, are within the limitations of the sub-disciplineand are supported by the applicable approved standards for testimony and report language..
    - The appropriate limitations have been included in the *Laboratory Report* for the conclusions and opinions stated therein.
- The *Laboratory Report* is accurate and there are sufficient supporting records for the results and/or conclusions stated in the *Laboratory Report*.
- Verification of identifications and associations has been completed and properly recorded, as applicable.
- Identifications and associations are put into the appropriate context in the *Laboratory Report* and any corresponding limitations appropriately stated
- The *Laboratory Report* contains all the required information.
    - For a *Laboratory Report* in the Explosives and Hazardous Devices sub-discipline, ensure that a destructive device opinion has been rendered and separated from technical descriptions and/or conclusions regarding the evidence comprising the components of an improvised explosive device (IED), as applicable.

The technical reviewer will also ensure that manual calculations, data transcriptions, and data reductions relevant to examinations are systematically checked for accuracy. Additionally, the technical reviewer will independently verify identifications or associations by reviewing or

examining relevant information, which may include items of evidence, data, charts, photographs, etc. The completion of both the technical review and the verification of identifications and associations will be recorded as a "Technical Review".

For FA cases, a technical reviewer will be selected in FA. Upon completion of the technical review, the reviewer will record his/her agreement with the examination process in FA by completing the review.

For legacy cases, the technical review will be recorded on a copy of the *Laboratory Report* as described in the LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records for Legacy Cases. A copy of the legacy *Laboratory Report* with the technical review signature will be maintained in the FBI Laboratory file.

Exceptions to the review recordkeeping process listed above will be when an administrative closeout report will be issued and no physical examination of the evidence has been conducted. In this case, only an administrative review will be performed.

If examinations have not been conducted or were canceled on evidence received prior to any examinations commencing, the authorized evidence management personnel managing the case will prepare a *Laboratory Report* as described in LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records for Legacy Cases and the LOM Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records in Forensic Advantage (FA). A technical review will not be required for this type of report.

For discontinued examinations, the affected examiner will prepare a *Laboratory Report* as described in LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records for Legacy Cases and the LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records in Forensic Advantage (FA).

Information regarding canceled or discontinued examinations will be recorded according to LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records for Legacy Cases and the LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records in Forensic Advantage (FA).

Technical or scientific discrepancies identified during a technical review will be addressed in accordance with the LOM – Practices for Resolution of Scientific or Technical Disagreement.

4.3 Administrative Review

All *Laboratory Reports* will be administratively reviewed. This review may be conducted in conjunction with the technical review.

An administrative review will be conducted by the issuing examiner's Unit Chief, appropriate Technical Leader, or any EU qualified examiner. Any physical case records will be delivered to the reviewer or scanned and transferred electronically.

For FA cases, an administrative reviewer will be selected in FA. Upon completion of the administrative review, the reviewer will record his/her approval of the *Laboratory Report* in FA by completing the review.

For legacy cases, the administrative review will be recorded on a copy of the *Laboratory Report* as described in the LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records for Legacy Cases. A copy of the legacy *Laboratory Report* with the administrative review signature will be maintained in the FBI Laboratory file.

These records signify approval for uploading the *Laboratory Report* to Sentinel.

If the issuing examiner's Unit Chief is qualified and authorized in the sub-discipline, he or she may conduct the technical review, verification of identifications and associations, and the administrative review.

4.4 Multiple Examiner *Laboratory Reports*

When a *Laboratory Report* in the sub-discipline of Explosives and Hazardous Devices is being issued and results from another examiner(s) must be included, the Explosives and Hazardous Devices examiner will identify each examiner's results and include a statement that includes the FBI Laboratory number and Case Record number of the other examiner's report, the examiner's name, and the date of his/her report as described in the LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records for Legacy Cases or the LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records in Forensic Advantage (FA), as appropriate. Each contributing examiner will be an approver in Sentinel, acknowledging agreement with his/her results as reported.

5 Expedited Results

Expedited or partial results of an examination(s) may be disseminated with the required dissemination information to the contributor prior to issuing a *Laboratory Report*. Refer to the LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records for Legacy Cases or LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records in Forensic Advantage (FA), as appropriate, for required dissemination information.

The following expedited or partial results of an examination(s) do not need to be confirmed by another qualified examiner prior to dissemination:

- Negative results
- Presumptive results

6 Uploading to Sentinel

After the appropriate reviews have been completed, the issuing examiner will ensure that his/her *Laboratory Report* and supporting records are uploaded to Sentinel.

When a *Laboratory Report* in the sub-discipline of Explosives and Hazardous Devices includes results from another examiner, refer to section 4.4 regarding multiple examiner *Laboratory Reports* for the Sentinel upload process.

If a case requires immediate issuance of a *Laboratory Report* in the issuing person's absence, a major or minor deviation will be requested as described in the LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records for Legacy Cases or the LOM – Practices for Preparing, Reviewing, and Issuing Laboratory Reports and Retaining Records in Forensic Advantage (FA), as appropriate.

7 References

FBI Laboratory Quality Assurance Manual, Federal Bureau of Investigation, Laboratory Division, latest revision.

FBI Laboratory Operations Manual, Federal Bureau of Investigation, Laboratory Division, latest revision.

Rev. #	Issue Date	History
5	07/15/2020	Updated sections 2, 3, 4, and 6. Changed name to Appendix A and added abbreviations.
6	04/01/2021	Updated scope and section 3.4.1. Updated section 4.3 to authorize any qualified EU examiner to perform administrative reviews. Replaced category of testing with sub-discipline throughout document.

Approval

Redacted - Signatures on File

Explosives Chemistry Technical Leader — Date: 03/31/2021

Explosives and Hazardous Devices Technical Leader — Date: 03/31/2021

Explosives Unit Chief — Date: 03/31/2021

QA Approval

Quality Manager — Date: 03/31/2021

Appendix A: *Abbreviations Used in Explosives Unit Case Records*

→	to, into, transferred to
(-)/-	negative
(+)/+	positive
(?)	indicates uncertainty
∅	absent
~	possible
=	consistent with, to the limit of the specific examinations performed
abs	absent
ace	acetone
ack	acknowledge, acknowledgement
Al	aluminum
amt	amount
AN	ammonium nitrate
ANFO	ammonium nitrate fuel oil
APCI	atmospheric pressure chemical ionization
API	atmospheric pressure ionization
appear	appearance
arb	arbitrary
AS	autosampler
assoc	associated
ATB	appears to be
ATR	attenuated total reflectance
AUSA	Assistant United States Attorney
ave, avg	average
AWG	American (standard) wire gauge
batt	battery(ies)
bl	blue
blk	black
bkg	background
BP	black powder
bpb	brown paper bag
BPS	black powder substitute
Br	brass
br, brn	brown
brt	bright
BSE	backscatter detector
CAN	calcium [carbonate] ammonium nitrate
CB	circuit board
CD	command detonation

CEXC	Combined Explosives Exploitation Cell
char	characteristic(s)
chem	chemical
CHP	concentrated hydrogen peroxide
CI	chemical ionization
clr	color(ed)
CND	could not determine
comp	composition
conc	concentrated
cond	conductivity
cont	continuous
cont	control
con't/cont'd	continued
conv	conversation
COTS	commercial off the shelf
CP	cordless phone
cps	counts per second
CTA	cotton tipped applicator
CTG	cartridge
CW, c/w, con/w	consistent with
D, D, Dia, diam	diameter
DADP	diacetone diperoxide
DAP, DAPh	diamyl phthalate
DB	double-base
DBP, DBPh	dibutyl phthalate
DCDA	dicyanodiamide
DEHP, DEHPh	diethylhexyl phthalate
dens	density
DEP, DEPh	diethyl phthalate
det	detonator
det [cord]	detonating [cord]
detc'd	detected
dia	diameter
DIBP, DIBPh, IBPH	diisobutyl phthalate
DIPP, DIPPh	diisopentyl phthalate
dil	diluted
discont	discontinuous
dist, distr	distribution
dk	dark
DMDNB/DMNB	dimethyldinitrobutane
DMP, DMPh	dimethyl phthalate
DNN	dinitronaphthalene
DNT	dinitrotoluene

DOT	Department of Transportation
DPA	diphenylamine
DPP, DPPh	diphenyl phthalate
DTMP	dual tone multi frequency
EC	Electronic Communication
EC	ethyl centralite
ECD	electron capture detector
EDTA	ethylenediaminetetraacetic acid
EDAX	brand name for energy dispersive X-ray spectrometer
EDX, EDS	energy dispersive X-ray spectroscopy
EFP	explosively formed projectile
EGC	eluent generator cartridge
EGDN	ethyleneglycol dinitrate
EI	electron impact
EIP, EIC	extracted ion profile/chromatogram
EISL	evidence interim storage locker
elec	electrical
elim	elimination
env	envelope
EOD	Explosives Ordnance Disposal
ESI	electrospray ionization
ESR	evidence storage room
ETN	erythritol tetranitrate
EtOH	ethanol
EU	Explosives Unit
EUC	Explosives Unit Chemistry
evap	evaporated/evaporation
evid	evidence
exp	expiration
exp, expl	explosive
EXPeRT	Explosives Reference Tool
FID	flame ionization detector
fil	filter
FPS	feet per second
frag, frg	fragment(s)
freq	frequency
FRS	family radio service
FST	flame susceptibility test
FTIR	Fourier Transform Infrared
GC	gas chromatography
gen char	general characteristics

GMRS	general mobile radio service
gr, grn	green
grad	gradual, graduated
GSM	global system for mobile communications
GWS	glass well slide
H	height
HC	homemade circuit
HCB, HMCB	homemade circuit board
HE	high explosive
Hex	hexane
HME	homemade explosive
HMTD	hexamethylenetriperoxide diamine
HMX	cyclotetramethylene tetranitramine
HP	hydrogen peroxide
HPD	heavy petroleum distillate
HPLC	high pressure liquid chromatograph
HS	headspace
HT	high-temperature
hvy	heavy
I	item
IC	integrated chip
IC	ion chromatography
ID	identification
IE	improvised explosive
IED	improvised explosive device
IL	ignitable liquid
IL	illegible
ILR	ignitable liquid residue
inc	include
inc	inconclusive
incorp	incorporated
indust	industrial
insol	insoluble
insuff	insufficient
IP	In-processing
IPA	isopropyl alcohol
IR	infrared
IRAM	improvised rocket assisted munition
irr	irregular
IS	internal standard
JEOL	brand name for scanning electron microscope

K, kn, KN	known [item]
KES	keyless entry system
L	left
L	length
lat	lateral
LC	liquid chromatography
LE	low explosive
LED	light emitting diode
lg	large
LPD	light petroleum distillate
LRCP/T	long range cordless phone/telephone
lt	light
lim, ltd	limited
LTQ	brand name for liquid chromatograph/mass spectrometer (linear trap quadrupole)
LVFC	limited value for comparison
LVIED	large vehicle improvised explosive device
Macro	macroscopic
mag	magnification
MC	methyl centralite
MDP	medium petroleum distillate
mech timer	mechanical timer
$MeCl_2$, MeCl	methylene chloride
med	medium
MEK	methyl ethyl ketone
MEKP	methyl ethyl ketone peroxide
MeOH	methanol
MHN	mannitol hexanitrate
Micro	microscopic
min	minimum
misc	miscellaneous
mito	mitrochrondrial [DNA]
mkd	marked
mod	moderate
MS	mass spectrometry
MSA	methanesulfonic acid
MSD	mass selective detector
Msg	message
Mscope, scope	microscope
mtDNA	mitochrondrial DNA
mult, multi	multiple

m/z	mass to charge ratio
m&p	mortar and pestle
NA	not analyzed
NA, N/A	not applicable
NB	nitrobenzene
NC	negative control
NC	nitrocellulose
nDNA	nuclear DNA
NDPA	nitrodiphenylamine
neg	negative
NG	nitroglycerin
NI	negative ion
NIST	National Institute of Standards and Technology
NM	nitromethane
nom	nominal
NQ	nitroguanidine
NSFC	not suitable for comparison
NSFCP	not suitable for comparison purposes
NSFSCP	not suitable for significant comparison purposes
NT	nitrotoluene
num	number
occ	occasional(ly)
op'd	opened
or, org	orange
P	pistol
part	particle(s)
PB	pill box
pc(s)	piece(s)
PC	positive control
PC	potassium chlorate
PCB	printed circuit board
PD	police department
PETN	pentaerythritol trinitrate
PFTBA	perfluorotributylamine
pg	page
PI	positive ion
PIR	passive infrared
pkgd, pkg'd	packaged
PMR	personal mobile radio
pos	positive
PP	pressure plate

PPC	potassium perchlorate
prep’d	prepared
prox	proximal
PS	polystyrene
Q	questioned [item]
RDX	cyclotrimethylene trinitramine
recv'd, rcv'd, rec’d, rec	received
R, rt	right
RC	radio controlled
rd, rnd	round
re	regarding
Ref	reference
Ref	reflective
rel	relative(ly)
ret’d	returned
RI	refractive index
R/S	representative sample
RS	rifle/shotgun
R-Salt	cyclotrimethylene trinitrosamine
RSP	render safe procedure
RT	retention time
RX	receiver
S	suspect
SAM	standard accelerant mixture
SB	single-base
SCR	silicon controlled rectifier
S/D, S&D	similarities and differences
SE	secondary evidence
sec ev, sec evid	secondary evidence
SEI	secondary electron detector
SEM	scanning electron microscopy
sev	several
SFC	suitable for comparison
Shav	shaving
SHN	sorbitol hexanitrate
sig, signif	significant
SIM	single-ion monitoring
slt	slight
sm	small
SN, S/No, S#	serial number
SNR	signal to noise ratio

sol	soluble, solubility
SP	smokeless powder
SPE	solid phase extraction
spec	specimen
SPME	solid-phase microextraction
ss	single strand
SS	spot size
ssteel	stainless steel
std	standard
TATP	triacetone triperoxide
TB	triple-base
TBEP	tributoxyethyl phosphate
TC, TELCAL	telephone call
TCR	transistor controlled relay circuit
TCU	tinned copper
TE	tamper evident [tape]
Telcal, telcall	telephone call
temp	temperature
TIC	total ion chromatogram
TM	testmix
TNT	trinitrotoluene
tpi	threads per inch
TPU	timing and power unit
TSQ	brand name for gas chromatograph/tandem MS/MS mass spectrometer (triple stage quadrupole)
TST	Thermal susceptibility test
TT	test tube
TX	transmitter
UN	urea nitrate
unID	unidentified
unk	unknown
unobs	unobserved
UPLC	ultra performance liquid chromatography, ultra-high performance liquid chromatography
v	very
V	victim
V	volt
vac	vacuum
var	variation, variable
VBIED	vehicle borne improvised explosive device
VCW	visually consistent with

VF	vacuum filter
v thn	very thin
W	width
wht	white
wrt	with regards/respect to
wt	weight
XPN	xylitol pentanitrate
XRD	X-ray diffraction
XRPD	X-ray powder diffraction
xtr	extract/extraction
ztb	zip-top bag